

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended, is respectfully requested.

Claims 1-3 and 5-17 are pending in this application. Claim 4 has been canceled without prejudice or disclaimer. Claims 1, 5, 9, 10, and 12 have been amended to better reflect the arrangement of the inner magnetic field varying components and their interaction with the first and second outer peripheral cylinders (e.g. 12a, 12b) common to all the embodiments of the present invention. The amendment to independent Claim 1 further emphasizes that the magnetic field generating means is disposed in a center area along the common axial line while the magnetic field varying means is noted to include first to fourth magnetic field varying components. Claim 6 has been amended to be rewritten in independent form and new Claims 14-17 have been added to vary the scope of the invention. No new matter has been introduced by the present Amendment.

The outstanding Action includes an objection to the title, a rejection of Claims 1, 2, 11, and 13 under 35 U.S.C. §102(b) as being anticipated by Nakane et al. (U.S. Patent No. 6,928,887, Nakane '887) and a rejection of Claims 2-5, 9, 10, and 12 as being unpatentable over Nakane '887 under 35 U.S.C. §103(a).

Applicants acknowledge with gratitude the indication that Claims 6-8 are only objected to as depending from a rejected base claim and would be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. As Claim 6 has been rewritten in the indicated independent form and as Claims 7 and 8 depend from rewritten independent Claim 6, the allowance of Claims 6-8 is respectfully requested.

The present Amendment changes the title to be more indicative of the claimed invention and withdrawal of this objection is respectfully requested.

The outstanding rejection of Claims 1, 2, 11, and 13 under 35 U.S.C. §102(b) as being anticipated by Nakane '887 is traversed as amended independent base Claim 1 requires, *inter alia*, a torque sensor including:

magnetic field varying means that includes first, second, third, and fourth magnetic field varying components and two outer peripheral cylinders of magnetic material, where the first and second magnetic field varying components are disposed in the center area to surround the magnetic field generating means, the third and fourth magnetic field varying components are disposed in adjoining areas to the center area, and said magnetic field varying means varying a relative direction and magnitude of a detection portion of magnetic flux from the magnetic field generating means flowing between the outer peripheral cylinders along an axis parallel to the common axial line in response to the relative rotation between the first rotary shaft and the second rotary shaft; and

magnetic sensor means that detects the detection portion of magnetic flux,

wherein the magnetic sensor means generates an output signal whose polarity changes in response to the relative direction of the detection portion of ~~detected~~ magnetic flux and whose magnitude changes in response to the magnitude of the detection portion of magnetic flux.

Nakane '887 teaches that the flux from the central magnet 8 is directly fed to the magnetic yokes 9 that are molded into a resin 15 along with a spacer 14 as described at col. 4, lines 1-5 and shown by FIG. 4. Thus, the elements 14 and 15 cannot be equated to the claimed outer peripheral cylinders of magnetic material as attempted at the bottom of page 3 of the outstanding Action as to Claim 5 because the only outer peripheral cylinders of magnetic material that are taught by Nakane '887 are the magnetic yokes 9 that interact directly with magnet 8. Clearly, Nakane '887 does not teach or suggest that the magnetic field generating means is disposed in the center area along the common axial line with the magnetic field varying means that includes first, second, third, and fourth magnetic field varying components with the first and second magnetic field varying components disposed in the center area to surround the magnetic field generating means and the third and fourth magnetic field varying components being disposed in an area adjoining the center area.

Accordingly, Nakane '887 cannot be said to anticipate Claim 1 or Claims 2, 11, and 13 that depend from Claim 1 and thus include all the limitations thereof. Each of Claims 2, 11, and 13 add further limitations to those of Claim 1 that are also not taught by Nakane '887.

Therefore, it is respectfully submitted that the rejection of Claims 1, 2, 11, and 13 as being anticipated by Nakane '887 should be withdrawn.

The rejection of Claim 4 is submitted to be moot in view of the cancellation of this claim.

Claims 2, 3, 5, 9, 10, and 12 all depend directly or indirectly from Claim 1 and the rationale offered as to using plural magnets in place of the multipolar magnet 8 at the bottom of page 3 of the outstanding Action does not correct the above-noted deficiencies of Nakane '887. Accordingly, the subject matter of Claims 2, 3, 5, 9, 10, and 12 clearly patentably defines over Nakane '887 for at least the same reasons Claim 1 does. In addition, these claims add further features to those of Claim 1 that are also not taught or suggested by Nakane '887 and patentably define over Nakane '887 for this reason as well.

Therefore, it is respectfully submitted that the rejection of Claims 2, 3, 5, 9, 10, and 12 as being unpatentable over Nakane '887 under 35 U.S.C. §103(a) should also be withdrawn.

New Claim 14 further requires a magnetic field varying means that includes first, second, third, and fourth magnetic field varying components disposed along the common axial line. In addition, new Claim 14 requires the first outer peripheral cylinder to be disposed to surround the first and third magnetic field varying components while the second outer peripheral cylinder will surround the second and fourth magnetic field varying components. This subject matter is also not shown or suggested by Nakane '887.

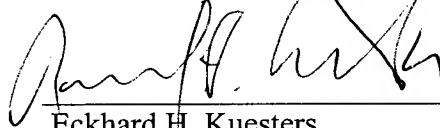
Accordingly, Claim 14 and Claims 15-17 that depend from Claim 14 also clearly patentably

distinguish over Nakane '887 and should be considered to also be allowable over this reference.

Consequently, in view of the present amendment and in light of the above discussions, it is believed that the outstanding rejections have been overcome, and the application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Raymond F. Cardillo, Jr.
Registration No. 40,440